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ABSTRACT

This case study on the experience of the University of Peking, China, in inter-university cooperation describes the process of identifying appropriate partner institutions and implementing collaborative programs with them. It also highlights a number of lessons for those managing inter-university cooperation and shows how such initiatives can be implemented successfully. The case study shows that inter-university cooperation is one of the effective ways to raise the internal efficiency of universities and also one of the best ways to increase the external efficiency of universities. For developing countries, inter-university cooperation at the international level is a way to cope with the "brain drain" problem. Inter-university cooperation is also a way to raise the overall academic level of teaching and research at universities. It is preferable to take an incremental approach to implementing inter-university cooperation instead of trying to do too much in one step. An appendix contains an inter-university agreement between the University of California and the University of Peking. (Contains 2 figures, 7 tables, and 26 references.) (SLD)

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Improving the effectiveness of higher education institutions through inter-university co-operation:

The case of Peking University

Min Weifang

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The case of Peking University

Min Weifang

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Chapter I
The national context

Inter-university co-operation in China has been developed along with the implementation of the state policies of economic reform and opening up to the outside world. The transition from the previous centrally planned economy to a more dynamic socialist market economy and the increasing international interactions have posed many new requirements and challenges for Chinese universities. Inter-university co-operation has been taken as an important approach for Chinese universities to improve their efficiency and effectiveness in order for them to better meet the needs of the fast-growing economy and the rapidly changing society. Thus, to understand the critical importance of inter-university co-operation as one of the reforms to improve the effectiveness of Chinese higher education, one has to understand the current social and economic changes, as well as the special structural features of the Chinese higher education system, which took its shape in the previous centrally planned economy, and was characterized by over-specialization, segmentation, and departmentalization, and the increasing financial constraints faced by universities in China.

1. The current social and economic changes in China

Since the late 1970s, China has started to implement new state policies of economic reform and opening up to the outside world, aimed at speeding up economic development, initiating the transition from the centrally planned economy to a market economy. Among the transitional economies in today's world, China has been relatively successful because the reform policies were systematically formulated and practically implemented according to its specific social, political, economic, and cultural background. The success is also due to the high saving rate and high investment rate of the country, the rich resources, availability of relatively educated labour, priority given to science and education, Chinese entrepreneurship, and the commitment and determination of the leadership to reform. Over the past 18 years, China's GDP has kept an annual growth rate of 10 per cent on average. China has also done well to bring down inflation. Together with the increased industrial labour productivity, the living standard of the people has increased at about 7 per cent each year in constant price. Eighteen years of reform efforts and modernization drive have won China international acknowledgement for its achievement in economic development. The principles of reform, opening up and a socialist market economy are deeply ingrained in the minds of the Chinese people. The socialist market system is gradually institutionalized.

It is also important to understand that China's economic transition coincides with the dramatic revolution of information technology which has led the world into the new age of the high-tech-based knowledge economy. The ability to generate, accumulate, deploy, and utilize information becomes crucial for development. As knowledge-based institutions, universities are required to play a more important role in the development process. Indeed, the fast-growing market economy, the rapid development of science and technology, and the increase of individual income and living standards has stimulated the ever-increasing demands for higher education. Furthermore, the information economy is international by nature. Capital, production, management, markets, labour, information and technology are organized across national boundaries, which has resulted in a strong tendency of globalization. Cross-cultural interactions, exchanges of students and faculty members, joint teaching and research programmes, frequent academic communications, especially through the utilization of the Internet, have formed an irresistible and irreversible trend of internationalization of higher education.

Needless to say, the economic transition and the information revolution have brought about a series of profound socio-economic changes, which have a strong impact on, and raise many requirements for, Chinese universities. However, the existing institutional framework and operational mechanism for Chinese higher education is still basically the one which was shaped in the context of the centrally planned economy. It was in such a framework that the current structure and administrative system of Chinese higher education was established and evolved over the past 40 years. To meet the needs of the newly developed market economy and the dramatic information revolution, institutional changes of the Chinese higher education system are absolutely necessary.

2. The structural features and efficiency issues of Chinese higher education

The basic structure of the current Chinese higher education system was established by a nationwide reform and reorganization in the early 1950s, which had two basic features:

Nationalization and departmentalization of higher education

First, all the higher education institutions existing in China at that time were nationalized, therefore, all universities and colleges became state-run institutions. Private and missionary universities and colleges were either merged into public institutions or closed down. This nationalization of the higher education system was taken as the precondition for reorganization of the higher education system in the early 1950s for the newly developed centrally planned economy.

Second, as a result of the adoption of the Soviet model of higher education, which was based on the rationale of the central planning of the economy and manpower training, many relatively highly specialized institutions were established and became departmentalized under different jurisdictions. For example, Beijing Geology College, established partially based on the Department of Geology of Peking University and earth sciences departments of other universities, became a very specialized college under the jurisdiction of the Ministry of Geology and Mineral Products. Similarly, Beijing Chemical Engineering College was established under the Ministry of Chemical Industry; Beijing Metallurgy College under the Ministry of Metallurgical Industry; Beijing Agriculture College under the Ministry of Agriculture; Beijing Aeronautics College under the Ministry of Aeronautic Industry; Beijing Institute of Post and Telecommunications under the Ministry of Post and Telecommunications, etc. The existing comprehensive universities also became more specialized. For example, Tsinghua University, which had been a comprehensive university, became an engineering-oriented institute, with its school of sciences and school of humanities and social sciences removed into Peking University (Beijing University). While some comprehensive universities, such as Peking University, remained as comprehensive universities, many of their engineering departments were transferred to other specialized institutions. In short, since the 1950s, the Chinese higher education system has been characterized by over-specialization, segmentation, and departmentalization.

As a result of the reorganization of higher education in the 1950s, the present structure of the public higher education system in China consists of 1,032 universities and colleges, of which only 35 are national universities directly under the jurisdiction of the State Education Commission; another 311 universities and colleges are under the jurisdiction of 61 central line ministries, such as the Ministry of Electronic Industry, Ministry of Metallurgical Industry, Ministry of Agriculture. The rest of the 686 are local universities and colleges under the jurisdiction of the 30 provincial governments which, again, are departmentalized and segmented at provincial level by the provincial bureaux, such as the provincial bureaux of light industry, provincial bureaux of agricultural machinery, etc., as shown in *Table 1*. Universities and colleges under the jurisdiction of the line ministries at the central level, or line bureaux at provincial level, are highly specialized, and their graduates are supposed to be assigned jobs in specific trades under the jurisdiction of each of the central ministries and provincial bureaux.

Table 1. Number of higher education institutions by their affiliation and jurisdiction in China, 1996

Affiliation Institute	Number of institutions	Undergraduate enrolment	Total nomber of employees	Total number of teachers	Student/ Teacher ratio
State Education Commission	35	280,541	139,687	46,389	6.04
61 Central Ministries	311	1,040,661	399,268	144,437	7.20
Provinces	686	1,699,877	496,853	211,643	8.03
Total	1,032	3,031,079	1,035,808	402,469	7.53

Source: Department of Planning and Construction, State Education Commission of China, 1997.

Problems emanating from departmentalization

This departmentalization resulted in many serious problems. First, the Chinese higher education system is segmented by the dividing lines and blocks of so many ministries, provinces, and bureaux. Second, since each of the ministries and bureaux tends to design the curriculum and train students for its own trade only, the academic programmes of Chinese universities and colleges tend to be over-specialized. Third, because the actual needs for the very specialized personnel are limited, the size of the specialized universities and colleges tends to be relatively small. Even in the early 1980s, the rapid expansion of Chinese higher education took place by following the existing structural patterns, without the state paying sufficient attention to issues of economies of scale and cost-effectiveness. Many specialized small universities and colleges under provincial departments and line ministries were established. The number of institutions of higher learning increased from 633 in 1979 to 1,075 in 1988. However, the average enrolment of Chinese universities and colleges had remained below 2,000. The segmentation and over-specialization of Chinese higher education led to low internal and external efficiency, as well as low quality in teaching and learning.

The low internal efficiency is first indicated by the low student/teacher ratio. In the mid 1980s, the student/teacher ratio in Chinese universities was around 4 to 1, while the international average was about 10 to 1 or 12 to 1 (World Bank, 1986). Because the programmes were over-specialized, the faculty workload was relatively low in comparison with other countries. For example, according to a survey of 44 universities and colleges in the mid-1980s in China, the average teaching-load of faculty members in the mid-1980s was only 4.8 hours per week in 1988, while in other Asian-Pacific countries it was about 9 to 12 hours on average. The utilization rate of university equipment and facilities is also relatively low because of its over-specialized nature. According to the estimates for 1985 of the State Education Commission, the average utilization of equipment and facilities was about 50 per cent of the hours available during the normal daytime period (World Bank, 1986). A survey of 116 universities and colleges in 1989 in three provinces, showed that the utilization of classrooms in these institutions was about 70 per cent and the utilization of laboratories was about 60 per cent on average (World Bank, 1991). According to the State Education Commission, although most universities and colleges were under-equipped, idle equipment still accounted for over 20 per cent of the total equipment in higher education institutions (Jiao, 1988). The relatively low utilization of equipment and facilities was partially due to the over-specialized nature of universities and colleges. In 1986, the total number of specialties in China was 15,804, compared with a total student enrolment of 1,879,994. Each specialty had an enrolment of 119 students, which meant that each specialty enrolled only 30 to 35 students (approximately one class) every year on average. Some specialties enrolled only a single class every two years, which led to a low utilization of highly specialized equipment and facilities. Low utilization of physical and human resources led to high unit cost. The average unit recurrent cost had always been more than 200 per cent of the GNP per capita in China while, in developed countries, it was about 50 per cent of GNP per capita; in East Asia and the Pacific about 100 per cent; and in those Asian countries at a level of economic development comparable to that of China, about 150 per cent on average (Tan and Mingat, 1992; World Bank, 1986). The specialized small institutions in terms of student enrolment resulted in low student/teacher ratio and diseconomies of scale, which had been one of the major problems preventing Chinese universities from achieving a higher level of efficiency and effectiveness. According to studies on Chinese higher education conducted by the World Bank (1986) and Min (1990), a university with a student enrolment of less than 4,000 was more costly than a university with a larger student population, as shown in *Table 2.*

Table 2. Simulation of unit cost by size of universities and student/teacher ratio in the 1980s in China (in yuan)

Unit cost		Student/teacher ratio			
		3.1	5.1	8.1	10.1
size of inst.	500	5201	2283	1956	1738
	1000	2805	2087	1759	1541
	2000	2206	1988	1661	1443
	4000	2157	1939	1612	1394
	6000	2141	1923	1596	1373
	8000	2132	1914	1586	1370
	10000	2127	1909	1532	1365

The unit cost in *Table 2* is the average unit cost per student at institutional level. It was calculated by: the total recurrent expenditure of each university divided by the total number of the full-time-equivalent enrolment of students. The simulation was based on the results of the econometric analysis of a sample including 212 universities and colleges in China.

Source: Min, Weifang, 1990.

The highly departmentalized and over-specialized nature of Chinese higher education also led to low quality and low external efficiency. Students were usually locked into very narrow fields of specialization, which made them less flexible and less adaptive to the economically and technologically induced changes in the workplace and the rapidly changing manpower needs of the labour market in a fast-growing economy. Though there are no systematic data available on the external efficiency of the Chinese higher education system, there was evidence of considerable mismatch between demand and supply of higher education graduates. For example, according to a survey by the Institute of Educational Research of Guizhou (1988), among the 100,000 college graduates employed in Guizhou Province, 40,000 were in posts not related to their qualifications.

New socialist market philosophy

As the economic sector took the lead in reform, dramatic changes took place in the human resource sector, which has had a strong impact on the higher education system. As stated by the Chinese leadership (CPC Central Committee, 1993), in the new socialist market economy, it is market demand and supply, but not the central plan, that will play the fundamental role in resource mobilization, allocation, and utilization. In the human resource sector, the labour market will play a fundamental role in human resource development and allocation. Under such a system, universities will have to gear their programmes to meet the human resource needs of the labour market. This does not mean that all the teaching, research, and services of universities will be shaped by market forces, but does mean that the human resource needs of the socio-economic development, as signaled by labour-market supply and demand, will be of great importance to universities.

As the labour market started to take its shape and function, higher-education graduates started to find jobs in the labour market place instead of closely following the job assignment of the governmental agencies. For example, a graduate from a specialized college under the Ministry of

Machinery Industry or the Ministry of Textile Industry might find a job in another trade, or in a joint-venture company, either because the ministry-run enterprises might not need the graduate, or because the other employers give the graduate a better offer. When this happens, it means, on the one hand, that the ministry concerned has lost the student it trained; and, on the other, the graduate concerned does not make full use of the over-specialized training. The graduate actually needs more flexibility and adaptability in terms of knowledge and skills. In essence, this problem is structural by nature, i.e. a problem that has resulted from the departmentalization, segmentation and over-specialization of the Chinese higher education system.

3. Current higher education reforms in China: structural adjustment

It has been recognized that the current structure of the Chinese higher education system does not fit in well with the newly developed socialist market economy. Systematic reforms have been implemented for structural adjustment.

Departmental boundaries

First, great effort has been made to break down the departmental boundaries between the ministries and provinces to introduce 'joint jurisdiction'. For example, both Zhongshan University and South China Polytechnic University are located in Guangdong Province and both of them used to be under the jurisdiction of the State Education Commission. Since 1993, the two universities have become under the joint jurisdiction of, and jointly financed by, both Guangdong Province and the State Education Commission. South China Agriculture University in Guangdong Province used to be under the jurisdiction of the Ministry of Agriculture, but now it is under joint jurisdiction with Guangdong Province. Hunan University used to be under the jurisdiction of the Ministry of Machinery Industry, now it is under the joint jurisdiction of the Ministry and Hunan Province. In Shanghai, Fudan University and Shanghai Jiaotong University have also become jointly administered and financed by the State Education Commission and the Shanghai Municipal government. Since 1993, more than a hundred national universities have shifted to a joint-jurisdiction arrangement by the central line ministries and the provinces. These universities have also adjusted their curriculum and enrolment patterns according to the labour-market needs of the area in which they are located.

Institutional mergers

Second, in the implementation of reforms in breaking down the departmental boundaries of the different ministries and provinces, some of the small over-specialized higher education institutions have gone further, in introducing institutional mergers to tackle the low-efficiency and low-effectiveness problems due to over-specialization, and to achieve economies of scale. Consolidating small institutions into larger ones, together with other efficiency measures, could considerably reduce unit costs in the long run, as shown in *Table 2*. It is crucial to break the boundaries of the segmentation and departmentalization which is the legacy of the centrally planned economy. The relevant administrative units have been encouraged to work together, rather than setting up competing establishments. Several pilot merger projects have been carried out in China since the mid-1980s.

For example, in Hubei Province, there was a merger of Hubei Light Industry College under the Hubei Provincial Department of Light Industry and Hubei Institute of Agricultural Machinery under the Hubei Provincial Bureau of Agricultural Machinery. The merger took place in 1985 to: *1)* achieve economies of scale; *2)* reorganize internally the newly merged university to improve both internal and external efficiency; *3)* expand enrolment to address the manpower needs of the provincial industries; *4)* improve the institutional conditions including school building, facilities and equipment to raise the instructional quality. A detailed case study on this merger was conducted under the sponsorship of the International Institute for Educational Planning (Min, 1994).

In Shanxi Province, three small colleges (Yuncheng Teachers Training College, Yuncheng Institute of Education, and Hedong University) were merged in order to achieve economies of scale and quality improvement. Another example in Shanxi Province was the merger of Shanxi Teachers University and Linfen Teachers College. In Shaanxi Province, Xian University and Xian Teachers College were merged.

In Guangdong Province, the reorganization of the higher education system also started with merger and consolidation of small colleges, such as the merger of Jiangmen University with Jiangmen Teachers College, the merger of Foshan University and Foshan Teachers College, and the merger of Xijiang University with Zhaoqing Teachers College. The implementation of this type of institutional merger has been accelerated at a larger scale since the mid-1990s. For example, in 1995, three small engineering colleges in Guangdong Province, i.e. Guangdong Machinery College, South China Civil Engineering College and Guangdong Institute of Technology, merged into an integrated Guangdong Polytechnic University; the highly specialized Shanghai Urban Construction College and Shanghai College of Construction Materials merged into a major university in Shanghai, Tongji University.

In the Sichuan Province, Sichuan University merged with Chengdu University of Technology. In Hangzhou City, there was a recent merger of four universities, including Hangzhou University, Zhejiang University, Zhejiang Agriculture University, and Zhejiang Medical University, into one. Since the mid-1980s, more than 200 universities and colleges have been involved in institutional mergers in China.

Inter-university co-operation

The third major reform is inter-university co-operation. While merging is an important and effective measure to tackle the structure-related efficiency problems of Chinese higher education, it is not always the most cost-effective way and not always feasible for all the different situations of the small and specialized universities and colleges. In many cases, the cost of a merger is relatively high, and the structural inertia sometimes makes it very difficult to implement. In some cases, institutional merger is simply not necessary and is impossible. Under such a situation, inter-university co-operation is an alternative for improving institutional efficiency and effectiveness. Thus, since the mid-1980s, those involved in inter-university co-operation have been encouraged to make best use of limited resources, rationalize small departments, eliminate duplications of programmes, and make arrangements whereby institutions can share expensive equipment, library books and journals, faculty members and other resources through mutually beneficial arrangements. Significant accomplishments have been achieved by Chinese universities and colleges through inter-university co-operation. The following is a case study of Peking University on inter-university co-operation.

Chapter II

The background of the institution

Peking University (Beijing University) is the first national university established by the Chinese State as an important part of the nationwide reform in 1898. At the beginning of its establishment, it was not only a university, but also the highest educational administration agency for the whole country. It gradually evolved as a modern university, as those in other parts of the world. After the 1911 revolution, Peking University no longer played this role for the national education system. Under the leadership of President Cai Yuanpei (1916-1927), Peking University quickly became the highest institution of learning of China and the cradle of the Chinese New Culture Movement, with the flag of patriotism, progressivism, democracy and sciences. In the past one hundred years, Peking University has played a very important role in shaping the educational, scientific, cultural, and socio-economic development of China. It has produced many national leading scholars, scientists, and political leaders, and has become one of the most important national leading universities in China.

By the early 1950s, Peking University had six major colleges including the College of Humanities and Social Sciences, College of Mathematics and Natural Sciences, College of Engineering, College of Law, College of Medicine, and College of Agriculture. These colleges covered almost all the major fields of academic studies. However, as mentioned in Chapter I, in the early 1950s there was a nationwide reorganization of the Chinese higher education system, based on the rationale of the centrally planned economy copied from the Soviet Union system, which resulted in a departmentalization and segmentation of the Chinese higher education system, and an over-specialization of universities and colleges in China. During the process of the reorganization in the 1950s, Peking University's College of Engineering was taken away and was merged into Tsinghua University, while Tsinghua University's College of Arts and College of Sciences were moved into Peking University. The College of Medicine of Peking University was moved out to form an independent Beijing Medical University, and the College of Agriculture was also moved out to form an independent Beijing Agriculture University, which was later renamed the Chinese Agriculture University. The whole Yenching University also merged into Peking University.

Currently, among the 1,032 universities and colleges in China, Peking University has the largest number of high-level academic programmes with 101 Doctoral Degree programmes, 148 Master Degree programmes, and 91 Bachelor Degree programmes in humanities, social sciences, natural sciences, high-technology and new engineering such as computer science and micro-electronics, economics and finance, management, law and education, etc. However, due to the reorganization of the 1950s, Peking University does not have the traditional engineering programmes such as mechanical engineering, civil engineering, and hydraulic engineering. It has also lost its medical and agricultural education programmes.

Peking University currently enrols about 24,000 students including 9,500 undergraduate students, 6,000 postgraduate students, among which more than 1,500 are doctoral students, about 7,000 continuing-education students (adult students), and about 2,000 foreign students from more than 60 countries. The university has 7,500 employees, of which 2,400 are faculty members, including about 860 full professors, 870 associate professors, and 750 junior teachers. It has 530 doctoral advisers (the highest-ranking professors in China accredited by the State Academic Degree Committee to advise Ph.D. candidates) and 31 members of the Chinese Academy of Sciences. As one of the national leading universities in the country, Peking University has more doctoral advisers and members of the Academy of Sciences than any one of the other Chinese universities. What Peking University does will certainly have an important influence on other higher education institutions in China.

Chapter III

The problems identified

Since the mid-1980s, along with the process of the deepening of the reform and further opening up of the country, dramatic economic and social changes have taken place, posing many new requirements and problems which Chinese universities have to tackle.

Financial constraints

First, the most serious problem was the increasing financial constraints. The decentralization and marketization of the Chinese economy has led to a dramatic change in the distribution of national wealth. As shown in *Table 3*, in the late 1970s and early 1980s, about 30 per cent of China's GNP went to state revenue, about 25 per cent went to enterprises, and 45 per cent went to individual families; while in the mid-1990s, only about 10 per cent went to state revenue, 20 per cent went to enterprises, and 70 per cent went to individual families, in China. The decreased state fiscal capacity has led to a situation where the state appropriation has accounted for a smaller and smaller proportion of total university expenditure in China. For example, in the early 1980s, the state allocation accounted for more than 95 per cent of the Peking University budget, but it decreased to less than 40 per cent in 1995.

Table 3. Distribution of GNP in China by percentage

Year	State revenue	Enterprises income	Individual income	Total
1980	30%	25%	45%	100%
1995	10%	20%	70%	100%

Source: Estimated by the author according to information from the State Statistics Bureau, 1997.

While public resources available to universities in relative terms are decreasing, the social and private demands for higher education opportunities, driven by both the fast-growing economy and the increase of individual income, have increased very quickly, resulting in a rapid growth of enrolment and, consequently, the financial needs of universities. Although the total amount of state appropriation to the universities has increased over the past few years, it could not keep up with the increasing financial needs, and it could not even keep up with the inflation rate. Like many other universities in China, Peking University has been faced with increasing financial constraints since the late 1980s. For example, the number of international academic journals subscribed and the number of new books purchased by the university library have been decreasing. Many of the university facilities and equipment have become out of date, but are short of funding for renewal. For example, some of the equipment items in the physics and chemistry laboratories are still those produced in the 1950s. The university's building-space (such as classroom, student dining halls and dormitory buildings) has become more and more crowded due to the expansion of enrolment. For example, according to the standard set by the State Education Commission, the dining place per student should be 1.3 square metres at university level, but it was only 0.7 square metres at Peking University. However, there is a serious shortage of funding for new buildings. Faculty salaries have been significantly lower in comparison with those working in business and joint venture companies, which has resulted in an unstable teaching force. Many young teachers and scholars have left the university for the business world, which is called 'jumping into the sea' of university teachers. These increasing financial constraints have driven the university to seek more efficient and effective utilization of its human, physical, and financial resources. It is expected that through inter-university co-operation, Peking University could have a better utilization of the scarce resources. For example, sharing facilities, laboratories, equipment, library books, and even faculty members could reduce the costs significantly by avoiding duplications of competing establishments of similar programmes among different universities.

Narrow scope of academic programmes

Second, a serious problem identified was that the relatively narrow scope of academic programmes made the university less flexible and adaptive to the rapidly changing needs of the society. As mentioned in the previous chapter, the reorganization of the Chinese higher education system in the 1950s according to the requirements of the rigid centrally planned economic system, resulted in the following consequences: *i)* departmentalization, and *ii)* over-specialization of Chinese universities. Peking University, as a national leading comprehensive university, has become less comprehensive since then. Some of its engineering and agriculture departments have either been moved out to other specialized engineering schools, or have become an independent university under the line Ministries of Industries or Ministry of Agriculture. Its medical college was separated and became Beijing Medical University under the Ministry of Public Health. This means that since the 1950s, Peking University's programmes have become more concentrated on the basic sciences and basic research, with very few on applied sciences and market-oriented programmes. Along with the implementation of new policies of reform and opening up to the outside world, and the transition from the ossified centrally planned economy to a more dynamic socialist market economy, Peking University is facing a new institutional context and many new requirements, a rapidly changing labour market with ever-increasing need for graduates in applied sciences. For example, students majoring in life sciences at Peking University have no opportunity to be exposed to health service or medical-study programmes, while the specialized Beijing Medical University does not have strong programmes in basic sciences such as life sciences and chemistry; Peking University has very strong programmes in mathematics and physics but not closely related engineering programmes, while the mathematics and sciences programmes of some of the specialized engineering universities are relatively weak. The departmentalization and over-specialization locked the students in narrow fields of study and reduced flexibility and adaptability of the universities to meet the needs of the fast-growing market economy and rapidly changing society. Obviously, the special feature of serious departmentalization and over-specialization of the Chinese higher education system made it especially important for Peking University, as well as other Chinese universities and colleges, to develop inter-university co-operation, which is complementary to each other and mutually beneficial.

Lack of space to accommodate students

Third, the increasing pressure for Peking University to accommodate more students was also an important issue. In the early and mid-1980s in China, only about 2 per cent of the college-age cohort population aged from 18 to 22 could have a chance to go to college. The increasing need for college-educated manpower of the fast-growing economy, at an annual rate of 10 per cent each year, and the rising living standard of people, at 7 per cent each year, make the demand for higher-education opportunities ever greater. More and more parents from different social groups are eager to send their children to college. There is a tremendous unmet demand. Peking University, as the national leading university, has to respond to it by enlarging its enrolment. Inter-university co-operation was considered one of the effective measures to address the pressure for enrolment expansion, because it was found, after a thorough investigation, that some universities, such as Peking University, had more teachers but less facilities, while other universities in China had more facilities but less teachers. If these universities could work together, more young people could be educated.

Quality of academic programmes

The fourth issue was the concern for quality of the academic programmes. When China underwent a ten-year so-called cultural revolution (1966-1976), Peking University not only had little academic contact and co-operation with other Chinese universities, it was also almost completely isolated from the international higher education community. The quality of teaching and research was set back for about 20 years by the cultural revolution, and the economic development and modernization drive called for an improvement of higher-education quality. It was believed that through inter-university co-operation, Peking University could improve its quality more rapidly.

Brain drain

The fifth serious problem identified by Peking University administration was the 'brain drain' which occurred along with the implementation of the open-door policy. Thousands of Peking university students and young teachers were sent abroad for graduate studies, with a large amount of precious hard currencies of the country, but the rate of return has been relatively low. It is imperative for Peking University to develop approaches to tackle this problem. The brain drain was caused by various reasons, including economic, financial, social and academic. When students or faculty members went to study in foreign countries such as the United States of America, they tended to stay there longer than expected or even stay there forever, maybe because the living standards and salaries there are higher, or the social context is more suitable for them, or quality of life there is better. However, in many cases, the brain drain is not only due to the reasons mentioned above, but also because the academic environment and atmosphere there is more stimulating for their academic studies and research and makes them more productive in their professional career. It is argued that international-level inter-university co-operation can help improve the academic environment of Peking University and thus help it, in part, to tackle the brain-drain problems.

Chapter IV

The search for solutions

The search for a solution by Peking University administration, together with the faculty and staff as well as students, to the above-mentioned problems was a long and incremental process. Clearly, to reduce the financial constraints, to solve the problem of the inflexibility and inadaptability resulting from the over-specialization and segmentation of the higher education system, to accommodate more students to meet the unmet demands for higher-education opportunities, to improve the quality of the teaching and research, and to tackle the brain-drain issues, needed a comprehensive approach. A consensus was gradually reached that, although inter-university co-operation was not the panacea to all these problems, it could help solve, or contribute to solving, or at least alleviate these problems.

Improved resource utilization

First, inter-university co-operation initiatives could be considered one of the useful approaches to improve the efficiency and effectiveness in resource utilization. Since the increasing financial constraints were faced not only by Peking University, but also by many universities both in China and abroad, both sides of the co-operative relationship could benefit from sharing facilities, laboratories, equipment, library books and academic journals. For example, expensive equipment and laboratories could be used by both universities; expensive journals shared instead of two or more subscriptions. Since the average classroom teaching load for a university teacher in the early and mid-1980s in China was only about four or five hours per week, the possibility of sharing specialized faculty members through inter-university co-operative arrangements was also thoroughly explored.

Broadening the scope of programmes

Second, it was argued that when the over-specialized colleges and universities in the segmented and departmentalized higher education system made collaborative arrangements with each other, they could broaden their programmes and scope of services significantly. Thus, Peking University decided to take inter-university co-operation as one of the feasible and effective approaches to tackle the over-specialization and departmentalization, and to make itself more flexible and adaptive to the new dynamic market economy. For example, the academic programmes of Beijing Medical University and Beijing Aeronautics University (both are specialized universities), with which Peking University intended to develop a co-operative relationship, are complementary with that of Peking University. Beijing Medical University used to be a part of Peking University, i.e. the Medical School of Peking University, which was separated from Peking University in the 1950s and became an independent health-service-oriented institution directly under the jurisdiction of the Ministry of Public Health, while Peking University was under the jurisdiction of the Ministry of Education. Beijing Aeronautics and Astronautics University was mainly an engineering institute under the jurisdiction of the Ministry of Aeronautics and Astronautics of China. The intended co-operation of the three universities would make each of them a more comprehensive university and broaden all these universities' programmes, enabling them to better meet the rapidly changing labour-market needs of the dynamic economy.

Better use of facilities

Third, higher education enrolment could be expanded by a better use of idle facilities. It was recognized that inter-university co-operation could help achieve the best use of the idle facilities available within the Chinese higher education system, so as to accommodate more students to reduce the pressure of unmet demand for higher-education opportunities. For example, the teacher/student ratio at Peking University in the early 1980s was only

1:3.2, but the university's classroom and dormitory space was relatively tight, while some other higher education institutions had the facilities, but were short of quality teaching-force. In the searching process, it was found that the distribution of physical resources, such as facilities and equipment, was very uneven. As shown in *Figure 1* and *Figure 2*, some universities had more classroom buildings but less library books, while others had more dormitory buildings, but less equipment. It was argued that inter-university co-operation would make these higher education institutions complement each other, and better tap the potential of the facilities, so as to provide more student places for the young people.

Figure 1 - Enrolment capacity of Peking University by type of facilities

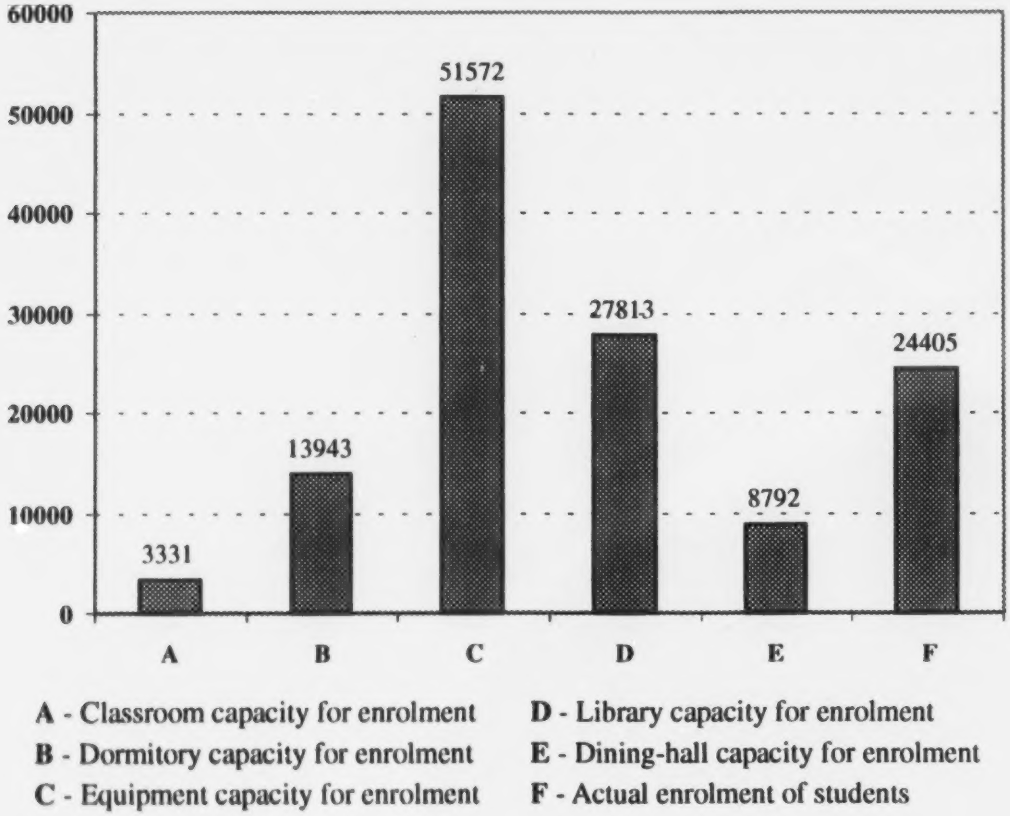
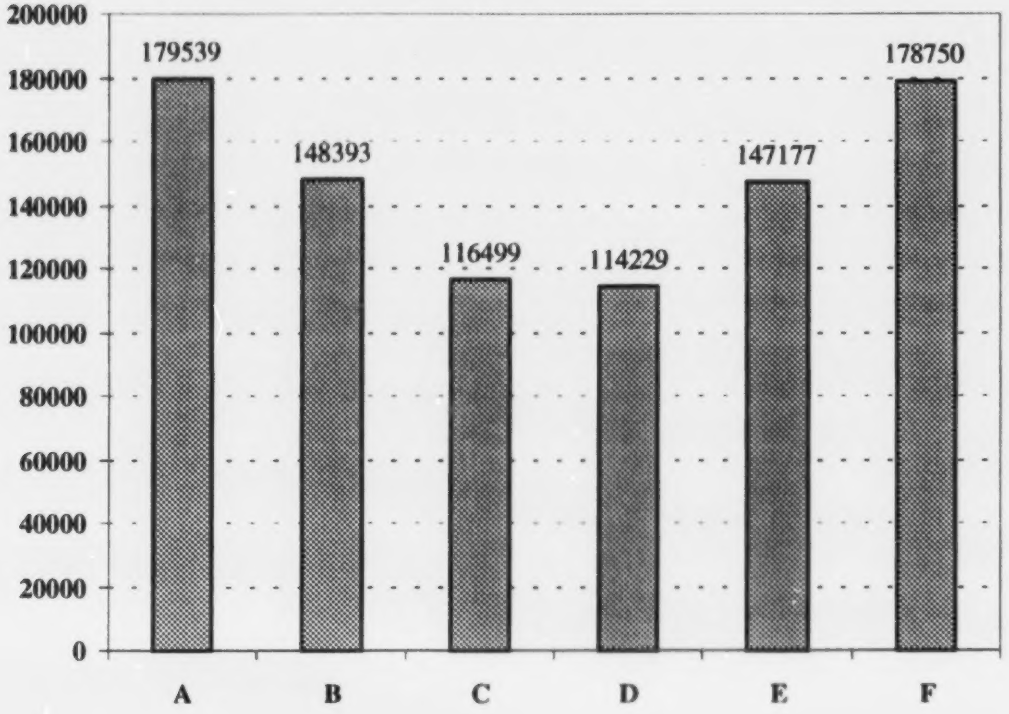


Figure 2 - Enrolment capacity of 40 other universities by type of facilities



A - Classroom capacity for enrolment
B - Dormitory capacity for enrolment
C - Equipment capacity for enrolment
D - Library capacity for enrolment
E - Dining-hall capacity for enrolment
F - Actual enrolment of students

Better quality of teaching and research

Fourth, it was also expected that through inter-university co-operation arrangements, such as exchanges of faculty members and joint research projects, the quality of teaching and research could be improved, because through these arrangements the quality inputs, such as library books, academic journals, rare equipment and expensive facilities, as well as knowledge and skills, could be shared by the faculty members of Peking University and those of all the other institutions entering the co-operative arrangements. Students could have more opportunities to take high-quality courses offered by the excellent teachers from each institution. Managerial experiences for quality improvement could be better disseminated and shared.

More opportunities for staff exchange

Fifth, it was believed that inter-university co-operation at international level could not only help Peking University improve its quality of teaching and research, it would also provide more opportunities for its faculty members and students to study abroad on a regular and frequent schedule and attract more foreign teachers, scholars and students to come to Peking University from other countries, thus improving Peking University's academic environment. Arrangements could be made in a form of joint academic programmes sponsored by both Peking University and its foreign university partners. Faculty members and students who attended these programmes would have to come back to Peking University as a precondition for being admitted to these joint programmes, thus reducing the brain-drain problem. It was expected that the mutually beneficial arrangements could also reduce the costs on international exchanges for Peking University and its partner universities abroad.

Chapter V
The objectives of the change

The objectives of inter-university co-operation had been widely discussed among the Peking University administrators, faculty and staff members, and students. It was recognized that these objectives had to be consistent with the overall institutional goals of the university, and inter-university co-operation was simply one of the major strategies formulated and adopted by the university to achieve the overall target for institutional development. Each of the concrete objectives set for inter-university co-operation was one of the steps to operationalize the institutional goals.

Raise the level of internal efficiency

Given the increasing financial constraints, the first objective of inter-university co-operation, together with other reform measures, was to raise the level of the internal efficiency of Peking University, including the optimal utilization of human resources, physical resources and financial resources available. For example, Peking University set the target of improving the student/teacher ratio from 1:3 in the early 1980s to 1:10 in the early 1990s, and the student/administrative-staff ratio from 1:10 to 1:30 in the same time period. This could significantly reduce the unit cost per student on faculty salaries and on administration.

Meet social demand

The second objective was, by making full use of the existing facilities and human resources, together with other necessary reform measures, to better address the unmet demand for higher-education opportunities. Peking University set the target to increase the total enrolment from about 8,000 in the early 1980s to about 20,000 in the mid-1990s.

Raise the level of external efficiency

The third objective was to raise the level of the external efficiency of Peking University, including the improvement of flexibility and adaptability to the technologically and economically induced changes, and relevance and responsiveness to the newly developed labour market of the fast-growing economy. For example, by co-operation with other specialized universities and colleges, Peking University would increase the numbers and varieties of courses offered to students and broaden its scope of academic programmes, thus making itself more flexible and adaptive to the rapidly changing manpower needs arising from the dramatic economic and social development.

Raise the quality of teaching and research

The fourth objective was to raise the quality of teaching and research through inter-university collaboration at national and international levels, as indicated by the improvement of the teaching and learning process by more student participation, higher-level satisfaction of students and teachers, improved students' score on academic achievement tests, larger proportion of college graduates going to graduate school, and better evaluation on graduates by the employers.

Reduce the brain drain

The fifth objective of Peking University was, through international-level inter-university co-operation, to reduce the 'brain-drain'. This objective was likely to be achieved because, by specific arrangements with international partner universities for overseas' study opportunities, the commitment to return to Peking University was a prerequisite for students enrolled in the exchange programmes. Another target of international inter-university co-operation was to reduce the costs of sending students abroad by arranging for them to take as many courses as possible at Peking University before they went overseas, and to establish a mutually beneficial relationship with universities in other countries.

Chapter VI

The planning for inter-university co-operation

The planning for inter-university co-operation was a continuous and dynamic process. Since it involved the decisions and actions of the partner universities, inter-university co-operation could not be planned only on the basis of Peking University's own wishful thinking. It had to be planned through interactions with the targeted partner universities. The plan had to be dynamic and flexible, because, along with the progress of the inter-university co-operation, new ideas, new proposals for co-operation would come up, and the original plan might need to be modified and changes become necessary.

The time period involved for the case study of inter-university co-operation programmes of Peking University ranges from the early 1980s to the mid-1990s, during which time China's economic reform was gradually deepened and the open-door policy was gradually institutionalized, inter-university co-operation being seen as one of the responses of Peking University to the new social and economic requirements. Further attention will be given to the recent development of inter-university co-operation.

Participation in the planning process

The members of the planning group for the development of inter-university co-operation at Peking University included the Chief Executive Council of the university, the University Academic Committee, the University Provost Office, the Office of International Co-operation of the University, the Graduate School of the University, and the Office of Scientific Research of the University. The colleges and academic departments also participated in the planning process. There are many different inter-university co-operation programmes at Peking University. The planning process for each of them could involve different offices and academic departments according to the nature of the programmes, and the plan of inter-university co-operation for each partner university should be formulated according to the specific situation of each institution and could be quite different, one from the other.

The Office of International Co-operation was responsible for co-ordinating inter-university co-operation with foreign universities. In the early and mid-1980s, this office made a plan for this type of co-operation, to develop an appropriately balanced distribution in terms of geographical location and academic field. Since the plan had to be made with the consultation and support of the partner universities, the office first chose those foreign universities which had had traditional links with Peking University in the past, about ten universities from the USA, ten universities from Europe, ten universities from Japan, ten universities from other Asian countries, and about ten universities from Africa and Latin America, to make initial contacts and start the planning process. Since each of the partner universities in different countries had a very different situation in terms of academic levels, teaching and research programmes, financial strength, managerial capacities and international experiences, the plan for inter-university co-operation varied dramatically from one to the other, and was made and modified according to the changing context of each of them, in a joint effort with the partner universities.

Example 1: The agreement with the University of California

For example, after several contacts and negotiation meetings, Peking University and the University of California system jointly formulated an inter-university co-operation plan, which was in the form of an official agreement signed by the representatives of both institutions on 26 March, 1986. After six years of implementation, the plan was modified and a new agreement was signed on 14 February, 1993, which was further modified with a new plan on 1 July, 1996. Appendix I provides the details of the three mutually agreed plans. The initial plan between Peking University and the University of California included the following major points:

1) Starting from the 1986/87 academic year, Peking University should send no more than five students to the University of California; and the University of California should send no more than 20 students to Peking University per year. The number of participating students could be modified by further planning based on mutual agreements in the future. (At the beginning, Peking University sent less students to California, simply because the cost for studying in California was higher.) The exchange students should register at the partner university at the beginning of the Autumn semester each year, and each December the two universities should review the performance of the exchange students and make arrangements for the following year, including the financial arrangements.

2) The exchange students should be excellent students with an average score above 'B' or better in previous university academic work. They should have serious interest in study made available through the inter-university co-operative programme.

3) The exchange students should complete at least two years of studies at their own university in their home country, before they could register in the partner university as exchange students.

4) The study programme of the exchange students should be jointly designed and determined by Peking University and the University of California and the corresponding academic departments of each institution. The participating students should continue as candidates for degrees of their home institution, and should not be the candidates for degrees of their host institution, and they should receive their academic degrees from their own university in their home country. (This item could help reduce the brain-drain problem).

5) Both Peking University students seeking admission to the University of California and the University of California students seeking admission to Peking University, under this inter-university co-operative programme, should be qualified for admission pursuant to the requirements and regulations of each institution. It was agreed that each institution reserved the right to reject candidates.

These co-operative arrangements reflected in the plan and agreement between Peking University and the University of California have been modified every few years, as shown in *Appendix I.* Similar inter-university co-operation plans with many other foreign universities were formulated.

Example 2: Co-operation with Hong Kong Shue Yan College

A special programme was formulated for inter-university co-operation between Peking University and Hong Kong Shue Yan College in 1986. Considering that Hong Kong would be reunified with China in July 1997, many people in Hong Kong would need to know more about the culture, the language, and the social and economic system in the mainland, which stimulated tremendous training needs for Chinese law, history, cultural anthropology, business in China, and mandarin Chinese. Peking University and Shue Yan College started inter-university co-operation to address these educational needs. Since Peking University had a large number of quality teachers and was short of classroom and dormitory space, while Shue Yan College had the space in Hong Kong but was short of sufficient quality teachers in the above-mentioned fields, and most of the students were resident in Hong Kong, a plan had been jointly formulated for Peking University to send teachers to teach at Shue Yan College in Hong Kong. At the beginning, the scope of this planned co-operation could be small and limited to the field of law, in order to gain some experience. The planned programme in 1986 included sending two or three teachers from Peking University to Shue Yan College each year and inviting two or three Shue Yan College teachers to Peking University, and exchanging three students each year in order for Hong

Kong students to come to Peking University to study Chinese law and for Peking University students to study Hong Kong law. It would be gradually expanded to run joint master degree programmes in civil law, international law, ancient Chinese literature, modern history of China, world economy, and international economic law, which would start in 1991. As always, the planned programme always included sharing library books and academic journals, as well as equipment and other facilities whenever needed and possible.

The Provost Office was responsible for planning and co-ordinating the inter-university co-operation with domestic universities. It first chose those universities which had traditional links with Peking University and whose academic programmes were complementary with those of Peking University.

Example 3: Co-operation with the Beijing Medical University

For example, Beijing Medical University used to be a part of Peking University and its senior faculty members had many connections with Peking University professors. Furthermore, it was identified that modern medical studies need to be based on strong science programmes such as biology, chemistry, psychology, and human development, which were relatively weak at Beijing Medical University, while Peking University's strong programmes and research accomplishments in basic sciences and humanities needed to be applied in practical fields. Thus, after several months of discussions and negotiations, Peking University and Beijing Medical University jointly formulated an inter-university co-operation plan, which included the following major points:

1) Starting from September 1995, a proportion of Peking University and Beijing Medical University students could take courses at each other's institution, and their credits for course work should be recognized and accepted by both institutions. Peking University and Beijing Medical University would establish joint master degree programmes and doctoral

degree programmes. For the students in the joint seven-year medical education programme by Peking University and Beijing Medical University, which aimed at training high-level medical doctors, for the first two years they should come to Peking University to be educated in basic sciences and humanities. Peking University should provide the necessary accommodation for them to acquire two years of residency on the campus of Peking University. For the following five years, they should go to Beijing Medical University for specialized courses in medicine and for medical internship at the teaching hospitals of Beijing Medical University.

2) Jointly appoint faculty members. Professors at Beijing Medical University and Peking University could be accredited as professors at each other's institutions, if they had the appropriate qualifications.

3) Peking University, especially its faculty of life sciences, faculty of chemical sciences, faculty of environmental sciences, faculty of demography, and Beijing Medical University would jointly establish a 'Beijing Medical Science Centre' to foster joint research programmes, develop new drugs, and formulate and submit research proposals for funding.

4) The two universities would share their library resources, campus facilities, information network and other resources. Peking University's Computing Centre would help Beijing Medical University improve its information system, while Beijing Medical University would help Peking University to improve its affiliated hospital.

Since Peking University started to systematically develop inter-university co-operation in the early 1980s, it has already established a collaborative relationship with 147 universities in China and abroad. The planned programme for each partner university was formulated according to specific needs and specific institutional situations of the partner institutions, thus each one was different.

Chapter VII

The implementation of inter-university co-operation

Successful implementation is the key to operationalizing the plans and agreements on paper into fruitful inter-university co-operation activities. Peking University adopted systematic strategies in the implementation of inter-university co-operation, which included the following elements, as illustrated through three cases: *a)* co-operation between Peking University and Beijing Medical University; *b)* co-operation between Peking University and Hong Kong Shue Yan College; and *c)* co-operation between Peking University and the University of California.

Establishing an organizational structure for managing the implementation

To guarantee a smooth implementation, it was necessary to establish an organizational structure for managing the inter-university co-operation. Since the scope and arrangements of inter-university co-operation with each partner institution were very different from one to another, the managerial arrangement for each of them was also very different. For example, since Peking University and Beijing Medical University had a very comprehensive collaboration including almost all aspects of teaching, research and services of both institutions, a high-level managerial office was needed for implementation. Thus, both institutions agreed to establish a joint committee for co-operation which included the presidents and executive vice-presidents, provosts, deans for graduate studies and directors for scientific research of both universities. Under this committee, a joint office for co-operation was established with regular full-time staff members for day-to-day co-ordination work.

Since the co-operation with the University of California at the beginning was mainly an exchange of students, the managerial arrangement was relatively simple. Considering 20 students studying at Peking University each year and its expansion in the future, both institutions agreed that the University of California set up an Office of Resident Representative stationed on the campus of Peking University to provide managerial services and guidance to the students of the University of California. This representative office worked closely with the Office of International Co-operation, the Office of Foreign Student Affairs, and academic departments concerned. Peking University provided office space on campus for the University of California representative. Since only five Peking University students were sent to the University of California each year, there was no need for Peking University to set up a resident representative office at the University of California. Peking University designated the chief of the North-American division of the Office of International Co-operation to be responsible for the managerial issues of these Peking University students in California, while the University of California also agreed to provide advisory and other academic services to Peking University students enrolled at the University of California.

The managerial arrangement for the inter-university co-operation between Peking University and Hong Kong Shue Yan College was different from others. Since the co-operation was mainly on the postgraduate programmes located in Hong Kong, Peking University held the Office of Associate Dean for Postgraduate Studies and the Office for Overseas Education accountable for the co-ordination of the work, which designated a specific staff member in their offices to be responsible for the daily business.

Developing a specific and concrete working procedure

After the organizational structure was established, an operating procedure needed to be developed, through which the daily work could be done. For example, for the inter-university co-operation between Peking University and Beijing Medical University, the Joint Committee for Co-operation was the highest decision-making body, while the joint operating office consisted of work staff who were the first point of contact for any matter related to the co-operative activities of the two universities. If some of the faculty members wanted to initiate a joint research project, which needed attention and support of both institutions, they should first contact the office, which, in turn, would contact the chief executives and academic departments concerned and direct these faculty members to what they should do and whom they should talk to. For the Beijing Medical University students who studied at Peking University for the first two years, the Peking University Office of Student Affairs should be contacted for these students' discipline matters, and the Office of Instructional Administration, together with each of the academic departments concerned, who would be responsible for the monitoring of these students' academic progress, and providing advice whenever there was a need. These functional offices and departments concerned should report issues and problems to the joint office, which, in turn, should report to the Joint Committee of the two institutions, as they saw necessary. By doing this, when any issue occurred, or any body had questions, they would know what procedure they should follow in order to solve the problem.

In the working procedure for co-operation with the University of California, both institutions agreed that the Office of Resident Representative would be the first point of contact in any emergency or any matter pertaining to student disciplines. This office should be the liaison division responsible for keeping in touch and working with the appropriate members of the academic staff of Peking University to provide regular academic advice to students of the University of California, and to evaluate the quality of their work. If there was any important issue that needed the attention of higher-level decision-makers, the Office of Resident Representative would report to the regional director of the University-Wide Office for Education Abroad Programme of the University of California which, in turn, would report to the university administration and the Board of Regents of the University of California, which had signed the inter-university co-operation agreement with Peking University. From the Peking University side, the division of North America of the Office of International Co-operation would be responsible for overall co-ordination of the co-operative activities with the University of California on campus. Whenever needed, this division would report to the Office of the Assistant President and Director for International Co-operation, which, in turn, should report to the Office of Vice-President for International Affairs and the University Executive Council. For the co-operation with Hong Kong Shue Yan College a similar, very clear, working procedure was developed.

Designating appropriate staff members in charge

After the organizational structure for inter-university co-operation was established and the working procedure clarified, the next important step was to find the right people for the right tasks, that is, to designate the appropriate staff members accountable for the day-to-day operation of the inter-university co-operation activities, and replace them whenever necessary. For example, considering the comprehensive nature of the co-operation with Beijing Medical University, Peking University appointed the Executive Vice-President, who was a very powerful administrator second only to the President, to be responsible for the overall implementation of the programmes. This executive vice-president also had a long-standing and very good relationship with the leaders of Beijing Medical University. In addition, the Provost, the Director for Research, the deans and leading professors in life sciences and chemical sciences, whose professional interests were very close and similar to the faculty of medicine, were also appointed to the various posts in the co-operative programmes.

Since the co-operation with the Hong Kong Shue Yan College mainly involved the postgraduate-level education programmes in law, economics, and Chinese history, Peking University appointed the associate deans for graduate studies, deans and professors in law, economics and history to be in charge of implementing the programmes with Shue Yan College.

Peking University's partner universities also appointed appropriate staff members working on the joint programmes. For example, the University of California usually appointed a professor who knew Chinese history, culture and the Chinese language, and who understood the Chinese institutional context, to serve as the resident representative.

Monitoring the day-to-day activities and reviewing implementation progress

To guarantee smooth inter-university co-operation, Peking University held appointed staff members in charge accountable for the day-to-day operation and reviewed implementation progress at regular intervals. For example, the joint postgraduate education programme on law with Hong Kong Shue Yan College involved setting up the programme objectives, developing the curriculum and instruction plan, designing the entrance examination, administering the examination, enrolling the students, the teaching and learning process, the mid-term examination, the final examination, evaluation of the programme quality, and a special graduation ceremony for the special joint programme. To ensure that the day-to-day operations were carried out correctly, appropriate monitoring was necessary. In addition, these operations had to be jointly reviewed from time to time by both universities entering the co-operation agreement.

Modifying the original plan and adjusting implementation action whenever necessary

Along with the progress of the implementation, experiences and lessons were accumulated from both the successes and failures in implementation. The original plan for inter-university co-operation, and the terms of reference for both institutions concerned, had to be modified from time to time. For example, after more than six years of co-operation between Peking University and the University of California, the two institutions reviewed the programme and made important modifications. In the new agreement signed on 14 February, 1993, the University of California increased the number of students sent to Peking University from 20 to 30 each year, while Peking University replaced the policy of sending students to the University of California by the policy of sending young teachers in order to address its urgent needs for faculty development. Students would be sent through other channels. This kind of modification and adjustment occurred very often in the implementation process.

Institutionalizing the co-operative arrangement

At the beginning, a new initiative for inter-university co-operation included some types of activities in addition to the regular work of the university. What Peking University did was to gradually integrate this type of work into its institutionalized operation, making it an integral part of the university life. Institutionalization was in the sense that: *1)* inter-university co-operation had a solid organizational structure for its implementation; *2)* standard operating procedures for inter-university co-operation were established, consisting of a series of regulations and rules; *3)* furthermore, the necessity and importance of inter-university co-operation had become an important part of the widely shared value and belief system of the university community, which was indispensable for the institutional development and success. Since the early 1980s, Peking University has established inter-university co-operative relationships with 147 universities in China and abroad. Co-operation has included exchanges of teachers and students, exchanges of printed materials, and joint research and teaching programmes. For example, some of its doctoral students took their first one or two years of course work at Peking University, and then went to its partner universities in other countries for one or two years of advanced study and research, taking advantage of their advanced facilities which it did not have, and then came back to write up their dissertations and prepare their oral defences. It improved the academic quality of the programmes and increased the returns from abroad.

Chapter VIII
Problems and obstacles

Differing objectives

First, the inconsistent expectations and objectives of the institutions entering the co-operative arrangement were very often a problem. Inter-university co-operation is a process of interaction of two or more higher education institutions. Since these universities usually have different historical backgrounds, they are located in different socio-economic environments, and they have their own specific institutional development goals, thus their expectations for inter-university co-operation are not always the same. Problems occurred when inconsistent targets were set by the institutions which entered the agreement. For example, when Peking University and Beijing Medical University started the co-operative relationship, what Peking University expected was to find applied fields for its basic research accomplishments in life sciences, chemical sciences, pharmaceutical studies, as well as psychological and human development studies, while what Beijing Medical University expected was to broaden and enhance its basic research and offer more basic-science courses to its students. The emphases of the two universities were somewhat different. When Beijing Medical University asked for more students to reside on Peking University campus for more and broader general education, some of the Peking University people thought this was quite a heavy burden on Peking University's facility and faculty. These types of differences between the institutions always exist and new differences occur from time to time, because they are not one entity, but two institutions with different institutional goals. Thus, thorough discussions and negotiations should be conducted at the beginning and frequent contacts and reasonable flexibility should be allowed for necessary adjustment in the implementation process in order to understand each other's position and to take care of the benefits for both sides. The appropriate tackling of this type of problem is crucial for the continuity of the inter-university co-operation. Both institutions entering the co-operation agreement should know that, in order to develop stable and mutually beneficial relationships, partner universities' interests and benefits should be fully considered. Furthermore, inter-university co-operation needs long-term perspectives. If the universities entering the co-operative arrangement only considered the immediate or short-term interests of their own, the co-operation would fail.

Resource constraints

Second, the implementation of inter-university co-operation consists of a series of activities, for which human, physical and financial resources are needed. When costs occur, problems will occur in how to finance the co-operative activities, and where the money comes from. Since most of the universities worldwide are facing increasing financial constraints to a certain extent, effective tackling of the financial issues is the key for the survival of the inter-university co-operative projects. Peking University's strategies to solve the financial problems included:

a) ***Sharing the costs in a reasonable way by the institutions concerned.*** For example, when different opinions occurred between Peking University and the University of California on the costs and finance of their inter-university co-operative activities, many negotiation meetings were held to discuss the problem and an agreement was reached including the cost-sharing arrangements such as: Peking University would charge the students of the University of California 25 per cent less than for the regular foreign-student tuition. In 1996 the regular tuition fee for foreign students was US$2,800 and there would be 29 students from the University of California to Peking University, so the total amount should be $2,800 X 29 = $81,200. The amount in the University of California's favour was: $81,200 X 25% = $20,300. Among the 29 students, three of them would be exempted from registration and tuition fees, thus $2,800 X 3 + $50 X 3 = $8,550, and the 25 per cent for these three students was $2,100, so the amount in favour of the University of California was $6,450. Thus the total amount in favour of the University of California was $26,750. And since Peking University decided to send three young teachers to the University of California as visiting scholars, the University of California decided to provide $9,000 for each of the three teachers, so the total amount was $9,000 X 3 = $27,000 in favour of Peking University. Peking University would provide logistic support for the University of California students and office space and living accommodation for the University of California Resident Representative at favourable rates of costs, and the University of California would exempt Peking University's young teachers from charges of laboratory and library fees. These arrangements took the interests of the two institutions into consideration and kept the costs for both sides balanced.

b) ***Adopting cost-recovery strategies from the beneficiaries of the inter-university co-operation.*** For example, the co-operation of Peking University and Hong Kong Shue Yan College led to the establishment of the joint master degree programmes in law, economics, and Chinese culture and history, which provided learning opportunities for many young people who pursued academic degrees in these areas. Thus a reasonable level of tuition fee was charged in order to cover the costs of these programmes.

c) ***Seeking financial aid from the outside foundations and related governmental agencies.*** For example, Peking University established a student and faculty exchange programme with Menlo College in California with a $1,500,000 grant from the David Packard Foundation, which supported the efforts of the two institutions to promote mutual understanding, friendship and co-operation between the students and scholars of the two countries. Many foundations provide this type of support. For example, the Global Foundation for Research and

Scholarship, based in Japan, provides financial aid for the ten Chinese universities, which are the participant universities in its activities to implement inter-university co-operation with Japanese universities, including exchanges of students and faculty members. Governmental funding was also available for some inter-university co-operation projects. China has agreements with certain countries so that when students and teachers from these countries come to China, the Chinese Government will provide some financial support for them; similarly, when Chinese students and teachers go to those countries, they provide financial support. Peking University has used a large amount of this type of funding for its inter-university co-operation projects.

d) ***Another approach for Peking University to tackle the financial problems of its inter-university co-operation projects was to jointly formulate proposals with its partner universities for funding from industries***. For example, the School of Management of Peking University and the Kellogg School of Management of the Northwestern University developed a joint faculty development programme financed by the Procter & Gamble Company, which has a very close relationship with Peking University and has financed several projects for the university's development.

Language obstacles

Third, the low proficiency level of foreign languages of the teachers and students of Peking University, and the low proficiency level of the Chinese language of its foreign partner universities, was another obstacle for international co-operative activities. To tackle this problem, Peking University ran a special intensive foreign-language training programme for its teachers and students, and also ran special Chinese-language training workshops for the students and faculty members of its foreign-partner universities. For example, the intensive English-language programmes for the Peking University teachers and students who would be sent to English-speaking countries, which were very effective and welcomed by the participants, were sponsored by an American Corporation, the Educational Services Exchange with China, Inc. (ESEC).

Chapter IX

The effect of inter-university co-operation

Since the early 1980s, the implementation of inter-university co-operation programmes has been an integral part of the comprehensive reform of Peking University, which indeed has had a significant impact on the university's overall operation and its efficiency and effectiveness.

Improved internal efficiency

The internal efficiency of Peking University has been improved remarkably. As shown in *Table 4*, through mutually beneficial arrangements in inter-university co-operation, the university's capacity was fully tapped. The utilization of human, physical and financial resources has been improved. For example, the student/teacher ratio was changed from 1:3.2 to 1:10.8 ; student/administrative-staff ratio from 1:10.5 to 1:34.9 from 1980 to 1997, as shown in *Table 5*. This has significantly reduced the unit cost per student on faculty salaries and on administration. Classroom and laboratory utilization rate has also increased from about 60 per cent to over 90 per cent over the same time period.

Better-met social demands

Another significant effect of inter-university co-operation, together with other reform measures, was to enable Peking University to better serve the unmet social demand for higher-education opportunities because of the improvement of internal efficiency and better utilization of resources available. As shown in *Table 4*, the enrolment of Peking University increased from 8,293 students in 1980 to 23,419 students in 1997, exceeding the target level of 20,000 students by 15 per cent.

Table 4. Basic statistics of Peking University, 1980-1997

Year	1980	1985	1990	1995	1997
Total number of students	8293	14152	14953	20012	23419
Number of undergraduate students	6984	9912	6802	9280	9033
Number of graduate students	650	2546	2636	4055	5415
Number of long-term foreign students	161	308	598	838	1083
Continuing-education students	498	1386	4917	5839	7888
Number of teachers	2559	2685	2434	2108	2170
Number of teaching support staff	549	969	893	1098	963
Number of researchers	130	286	1316	740	709
Number of administrators	789	638	743	653	670
Other employees	2497	2359	2208	2491	2440
Total staff	6524	6937	7594	7090	6952

Improved external efficiency

The external efficiency of Peking University has been improved. Through inter-university co-operation, Peking University's programmes were broadened, which made the university more flexible and adaptive to the technologically and economically induced changes, enhancing its relevance and responsiveness to the newly developed labour market of the fast-growing economy. By working closely with other specialized universities and colleges, such as Beijing Medical University, both universities increased the numbers and varieties of courses offered to students, overcame the departmentalization and over-specialization problem of Chinese higher education institutions, and broadened their scope of academic programmes and services, thus improving their flexibility and adaptability to the rapidly changing manpower needs and better serving the socio-economic development of the country. For example, Beijing Medical University students broadened their knowledge base by taking courses at Peking University, while faculty members of Peking University found more applied fields for their basic research accomplishments through working with Beijing Medical University. For example, one of the research accomplishments of the Department of Technical Chemistry of Peking University led to the development of a new medicine in 1993, the Xuezhikang capsule, which was approved by the Ministry of Public Health of China and protected under the National Secrecy Regulation. It is an all-natural biomedicine. It is effective for treating and preventing hyperlipidemia, atherosclerosis and cardio-cerebro-vascular diseases such as coronary heart disease. With the support of Beijing Medical University and its affiliated teaching hospitals, the development process and the tests for clinical use of this new medicine became more smooth. The inter-university co-operation of Peking University with Hong Kong Shue Yan College helped Hong Kong train many specialized personnel, such as lawyers who knew the Chinese legal system, economists who knew the Chinese economic system, and experts who knew more about the Chinese culture and history, thus contributing to the process of reunification of Hong Kong with China. Inter-university co-operation between Peking University and many foreign universities has flourished in the past 18 years. Peking University has become the most open and internationally most active university among all the universities in China. Each year, more than 20,000 foreign scholars and students visit Peking University. This has not only contributed to the improvement of internal efficiency and the academic programmes, but has also promoted mutual understanding, communication, friendship, and co-operation between the Chinese people and peoples in other countries, thus contributing to the implementation of the national policies of opening up to the outside world, and accelerating the internationalization process of Chinese higher education.

Table 5. Changes of student/teacher ratio and student/administrator ratio of Peking University, 1980-1997

Year	1980	1985	1990	1995	1997
Student/teacher ratio	3.2	5.3	6.1	9.5	10.8
Student/administrator ratio	10.5	22.1	20.1	30.6	34.9

Improved quality of teaching and research

Since the 1980s, the implementation of inter-university co-operation has helped raise the quality level of teaching and research at Peking University significantly. First, inter-university co-operation at national and international levels provided many opportunities for faculty development through exchange programmes, thus improving the quality of the faculty, as indicated by the fact that more than 200 junior faculty members received their doctoral degrees through these programmes at the partner universities. Considering that there had been a serious problem of 'inbreeding' of faculty members in the Chinese higher education system, including Peking University, there was a significant improvement of the quality of faculty. Second, inter-university co-operation brought in new ideas of curriculum design and teaching methodology. For example, the previous teaching approach through traditional lectures with blackboard and chalk, which emphasized the memorization of actual knowledge, was gradually improved by the new ideas of teaching through mutual learning with the partner universities in other countries, such as the heuristic teaching approach, which emphasized the development of students' abilities, creative thinking and intellectual independence and student participation. Students have become more and more active in the teaching and learning process. In addition, many new courses and lectures have been offered by professors from the international partner universities. For example, during the 1996/97 academic year, 254 international scholars and professors came to Peking University on either short-term or long-term arrangements. These scholars and professors offered 200 seminars and lectures and 40 new courses, which were not available before. Survey results showed the level of satisfaction for teaching and learning by students and teachers improved from 76 per cent to 85 per cent and from 76 per cent to 83 per cent respectively. Students' scores on academic achievement tests were also improved significantly from 86 per cent to 92 per cent on average, and the proportion of Peking University graduates going to postgraduate schools in China and abroad increased from about 10 per cent to 35 per cent, according to some survey results. Better evaluation of Peking University graduates by the employers was reflected from the related survey studies, showing that students nowadays have a wider range of knowledge, creative thinking, better trainability and more flexibility and adaptability. The research capacity of Peking University was also enhanced through inter-university co-operation. Over 2,000 research projects in science and technology, social sciences and humanities, in business administration and law, were completed through domestic and international co-operative arrangements. Some of these projects achieved important results and won national and international prizes.

Reduced brain drain

Another important effect of inter-university co-operation at Peking University was that the brain-drain problem was alleviated and reduced. From the mid-1980s, more than 2,000 young teachers and postgraduate students of Peking University were sent to study at foreign universities (this number does not include students who went to study abroad on their own), most of which were developed countries' universities such as Harvard, Stanford, Oxford, Berkeley, Tokyo. About 70 per cent of them have already come back to Peking University. This was made possible by specific arrangements with international partner universities, that young people who took these opportunities of studying abroad had to make the commitment to return to Peking University, which was a prerequisite for students to be enrolled in the exchange programmes. Another effect of international inter-university co-operation was that the costs of sending young teachers and students abroad were reduced by arranging for them to take as many courses as possible at Peking University before they went abroad, and to establish a mutually beneficial relationship with universities in other countries.

Chapter X

Evaluation of the experiences in inter-university co-operation

Inter-university co-operation at Peking University has been a very important part of its comprehensive strategy for institutional development and has related to almost every aspect of the university life. Thus, it has to be evaluated from time to time. For example, the University Office of International Co-operation conducted annual evaluation on the international level of inter-university co-operation every year, while the Provost Office conducted evaluation on domestic inter-university co-operation. Recently, in order to formulate long-term strategies for institutional development in the twenty-first century, a more comprehensive evaluation of its past experiences on inter-university co-operation was conducted by both the university itself and by outside agencies, such as the group on international-level inter-university co-operation from the International Co-operation Department of the Ministry of Education of China (formerly named State Education Commission of China), and the group on domestic inter-university co-operation of the Department of Higher Education of the Ministry of Education.

The overall evaluation was very positive in terms of explicit goals and objectives, as specified in Chapter V. Through implementation of inter-university co-operation, Peking University has attained a higher level of academic achievements and better quality of teaching and learning, as discussed in the previous chapter, and become more open, more flexible and adaptive, and better known both inside and outside China. For example, in the year of 1997, more than 30 domestic academic conferences and 17 important international conferences were held at Peking University, such as the 'Sino-Germany University President Conference', 'Sino-UK Joint Conference on Higher Education', '1997 International

Conference on Postgraduate Education', '1997 International Conference on International Communications and Co-operation Among Universities'. These were all very successful conferences, which, in turn, further enhanced Peking University's inter-university co-operation programmes.

The faculty members, students, and administrative staff of Peking University were surveyed for the evaluation of its inter-university co-operation programmes, and the results showed a very high level of satisfaction with them. Partner universities were also contacted for the evaluation of the programmes. The inter-university co-operation agreement has served as an institutional umbrella, under which many activities have taken place. Faculty members of Peking University enjoyed the opportunities to work with professors of the partner universities in conducting interdisciplinary and multidisciplinary studies, for developing joint curriculum and teaching programmes. Students enjoyed taking courses and experiencing different campus culture at each other's institution to broaden their knowledge and skills. For example, students of Beijing Medical University who spent two years at Peking University had a much wider knowledge base and became more active in institutional affairs, which has been a very strong tradition of Peking University students for a whole century. The results from a survey of 334 faculty members, administrators and students of Peking University showed that they evaluated highly the inter-university co-operation programme, as shown in *Table 6.*

Inter-university co-operation with domestic universities has been quite successful. It has made the relationship between Peking University and its partners much closer. For example, based on the past successful co-operation, now Peking University and Beijing Medical University are planning a merger of these two institutions into one university, with one unified management structure, curriculum and teaching, and institutional development plan. Some other domestic universities also showed great interest in establishing inter-university co-operative relationships with Peking University. Similar success has been achieved for co-operation with international universities.

Table 6. Percentage of responses by teachers, administrators and students of Peking University on inter-university co-operation related questions

	Dis-agree	Indif-ferent	Agree	Strongly agree
• Inter-university co-operation is very important for PKU development		2	17	81
• Inter-university co-operation improves PKU's human resource utilization		2	23	75
• Inter-university co-operation improves PKU's physical resource utilization		4	22	74
• Inter-university co-operation improves PKU's financial resource utilization		6	26	64
• Inter-university co-operation improves PKU's external efficiency and relevance		4	34	62
• Inter-university co-operation is one of the good strategies for faculty development		1	12	87
• Inter-university co-operation helps improve PKU's quality of teaching		5	21	74
• Inter-university co-operation helps to enhance PKU's capacity for research		1	9	90
• Inter-university co-operation raises the overall level of PKU's academic performance	1	2	23	74
• Teachers and students enjoy international exchange programmes through inter-university co-operation			7	93
• PKU's inter-university co-operation contributes significantly to internationalization			5	95
• The attractiveness of PKU to students abroad is increased by inter-university co-operation		4	16	80
• The cohesiveness of PKU is enhanced through inter-university co-operation		3	16	81
• Inter-university co-operation at PKU should be further strengthened and institutionalized			18	82

N = 334 (About one third are administrators, one third teachers and one third students)

Source : A survey conducted by the author at Peking University.

A survey of 265 administrators, teachers, and students of international partner universities was also conducted by the author, results showing a very positive response again, as presented in *Table 7*. Most of the administrators, teachers and students from the partner universities believed that the inter-university co-operation programmes with Peking University were very important, valuable, and fruitful to the partner universities. They contributed to the efficiency gains and quality improvement of these institutions, and received wide support from the partner universities, who committed themselves to continue and strengthen the co-operative relationships.

Table 7. Percentage of responses by foreign university administrators, teachers and students on co-operation with PKU related questions

Survey items	Dis-agree	Indif-ferent	Agree	Strongly agree
• Co-operation with PKU is very important for our university	2	5	18	75
• Co-operation with PKU is very valuable for our university	1	4	20	75
• Co-operation with PKU is very fruitful for our university	5	4	21	70
• Co-operation with PKU contributes to the efficiency gains of our university	4	6	25	65
• Co-operation with PKU contributes to the teaching quality improvement of our university		7	25	68
• Co-operation with PKU contributes to the research accomplishments of our university		4	44	52
• Co-operation with PKU contributes to the internationalization of our university			22	78
• Students and staff of our university support co-operation programmes with PKU	1	4	20	75
• Co-operation programmes with PKU were very well managed	9	3	50	38
• Co-operation with PKU should be continued and strengthened		7	25	68

N = 265 (About one third are administrators, one third teachers and one-third students)

Source: A survey conducted by the author.

Overall, the inter-university co-operation programmes at Peking University have been successful, and all the major objectives set by the university have been basically achieved. Now, Peking University has been receiving more and more requests to establish inter-university co-operative relationships from universities inside and outside China. One of the problems faced by Peking University now, is that it has to be more selective in choosing partners. For example, Peking University now has co-operative relations with 147 universities which include 32 American, 5 Canadian, 17 Japanese, 11 Korean, 6 German and 5 British universities, etc. More universities have expressed their wish to establish co-operative relationships with Peking University, which simply could not work with so many partner universities at the same time.

Chapter XI
Conclusions

From experiences over the 18 years of implementation of inter-university co-operation by Peking University, the following conclusions could be drawn:

1) Inter-university co-operation is one of the effective ways to raise internal efficiency of universities through improving the allocation, mobilization and utilization of human resources, physical resources and financial resources by sharing and complementing each other. Given resource constraints, more student places can be provided by working together instead of staying alone as competing establishments. Thus, more priority should be given to inter-university co-operation in higher-education development, especially at the present time, when higher education systems in many countries are facing increasing financial constraints.

2) Inter-university co-operation is one of the effective ways to improve the external efficiency of universities by broadening the universities' programmes and increasing their flexibility and responsiveness to the rapidly changing labour market needs and social and economic environment. This is especially important for Chinese universities, given the structural features of the Chinese higher education system characterized by over-specialization, departmentalization and segmentation.

3) For developing countries, inter-university co-operation at the international level is one of the approaches to cope with the 'brain drain' problem. First, arrangements that students and teachers return to their

home institutions should be made a prerequisite for their participation in these programmes. Second, frequent communication and exchanges with foreign universities make the institutions more open and internationalized, which increases the institution's cohesiveness and attractiveness to students studying abroad.

4) Inter-university co-operation is also one of the strategies to raise the overall academic level of teaching and research at universities. It is a positive approach, resulting in mutual benefit, because through the co-operative arrangements, universities can learn from each other, share their best teachers and facilities and support each other's research efforts.

5) Careful planning is essential for successful inter-university co-operation. In order to develop stable and mutually beneficial relationships, partner universities' interests and benefits should be fully considered in the planning stage. Since inter-university co-operation needs long-term perspectives, a long-term, strategic plan is needed in addition to the immediate action plan. If the universities which enter the co-operative arrangement only consider their own immediate or short-term interests, the co-operation could not last and flourish.

6) It would be more feasible to take an incremental approach in implementing inter-university co-operation, from small-scale to large operation, from simple programmes to complicated programmes, instead of trying to go too far in one step. Regular and timely consultation with corresponding offices at the partner universities should be used, because the process of implementation always involves interactions with the partner universities, as problems and difficulties might very often occur. For implementation purposes, university-level management should always be aware that the university-level plan and agreement could only serve as an institutional umbrella for inter-university co-operative arrangements, while the colleges and academic departments within the university should be mobilized to carry out the concrete co-operative

activities. Standard operating procedures for inter-university co-operation should be developed to institutionalize the co-operative arrangements and activities. A solid legal infrastructure should be established to clarify the obligations and protect the interests and rights of each university involved.

Appendix I

FIRST AGREEMENT

THIS AGREEMENT is made and entered into as of the 26th day of May, 1986, by and between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California corporation, hereinafter designated as 'The Regents', and THE PEKING UNIVERSITY, hereinafter designated as 'Peking University'.

WITNESSETH:

WHEREAS, the parties hereto believe that the educative process at their respective institutions would be enhanced and mutual understanding between their respective students would be increased by the establishment of a student exchange programme organized pursuant to the Education Abroad Programme of the University of California.

NOW THEREFORE, the parties hereto hereinafter agree as follows:

1. During the 1986-87 academic year, and for each year during the term of this Agreement, not more than twenty (20) students enrolled at the University of California may be concurrently enrolled at Peking University through this exchange Agreement, and not more than five (5) students enrolled at Peking University may similarly be concurrently enrolled at the University of California, commencing with the autumn term of each institution and lasting for one (1) academic year. Said students shall have completed at least two (2) years of university work prior to such concurrent enrolment, and may include graduate students. Participating students will continue as candidates for degrees

of their home institution, and will not be candidates for degrees of the host institution. These numbers of students may be modified in the future by mutual agreement.

2. Participating students in the exchange programme will be selected by their home institution, the method of selection to be determined by each party hereto applying the following criteria in a general way: (a) academic excellence as reflected by a 'B' average or better (honours students) in previous university academic work; and (b) seriousness of interest in study made available through the exchange programme.

3. University of California students seeking admission to Peking University and Peking University students seeking admission to the University of California under the terms of this Agreement shall be qualified for admission pursuant to the requirements and regulations of each institution. It is understood that each institution reserves the right to reject candidates.

4. The Regents shall appoint a member of the faculty of the University of California to serve as the representative of the University of California in its contacts with Peking University. Said representative shall be the first point of contact in any emergency or any matter pertaining to student discipline, and shall co-operate as appropriate with members of the academic staff of Peking University in the academic advising of the University of California students and in the evaluation of the quality of their work.

   Said faculty member shall be designated a Visiting Scholar and shall be provided housing and office space at Forty Yuan (Y40) per day.

   The University of California agrees to provide appropriate advisory and other academic services to Peking University students enrolled at the University of California.

Each University of California and Peking University student in the exchange programme shall pursue an academic programme which is developed in consultation with his respective institution and which is not in conflict with the regulations of the host university.

5. Both the University of California and Peking University agree within the framework of this Agreement to work together towards the integration of University of California students into Chinese student life and the integration of Peking University students into American student life.

6. University of California students will be housed in dormitories of Peking University, two (2) or three (3) students per room, with Chinese roommates, if possible. Said students may choose to take their meals in the cafeteria for foreign students or in the Chinese students' cafeteria. The cost for such housing and meals shall be at a cost no greater than that charged to other students housed in the dormitory for foreign students. The cost for such housing and meals shall be paid by the students as individuals.

7. Both the University of California and Peking University agree that student fees for the forthcoming year shall be determined through discussion prior to December of each year. The 1986-1987 fee structure is specified in the Appendix to Agreement attached hereto.

   The University of California further agrees to pay the sum of One Thousand Dollars ($1,000) for each University of California student enrolling in Peking University under the terms of this Agreement to provide scholarship assistance for Peking University students enrolled at a campus of the University of California. Said scholarship assistance money shall be retained by the University of California and shall be allocated to Peking University students in accordance with written instructions from Peking University.

The University of California agrees that Peking University students enrolling at the University of California under this Agreement will be exempt from tuition and fees. Peking University agrees to exempt the tuition and fees for a reciprocal number of University of California students enrolling at Peking University.

8. Peking University and the University of California will be responsible for the implementation of the mutually agreed-upon curricula of the Chinese and English language study programme.

9. It is understood that this Agreement shall commence on the First Day of July, 1986, and shall continue thereafter for five (5) years, subject from time to time to revision or modification by mutual agreement. Either party hereto, by written notice to the other party no less than five (5) months prior to the end of any such year period, may terminate this Agreement at the end of such current year period.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

The regents of the University of California	**The Peking University**
By ______________________	By ______________________

SECOND AGREEMENT

THIS AGREEMENT is made and entered into as of the 14th day of February, 1993, by and between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California corporation, hereinafter designated as 'The Regents', and THE PEKING UNIVERSITY, hereinafter designated as 'Peking University'.

WITNESSETH:

WHEREAS, the parties hereto believe that the educative process at their respective institutions would be enhanced and mutual understanding between their respective students would be increased by the continuation of an academic exchange programme organized pursuant to the Education Abroad Programme of the University of California.

NOW THEREFORE, the parties hereto hereinafter agree as follows:

1. During the 1991-92 academic year, and for each year during the term of this Agreement, not more than thirty (30) students enrolled at the University of California may be enrolled for the regular academic year at Peking University through this exchange Agreement. Five additional University of California students may be enrolled at Peking University for the spring semester only through this exchange Agreement. For every ten (10) University of California students enrolled under this Agreement at Peking University for a full academic year, one scholar from Peking University may visit the University of California for one academic year as a visiting scholar. For any fraction of ten University of California students per academic year, fractional credit may be generated and carried forward from one academic year to the next until a full credit is earned. Full credits must be used by a Peking University visiting scholar within the academic year following the year in which the full credit was finally generated.

2. Participating students from the University of California shall have completed at least two (2) years of university work prior to enrolling at Peking University. Students, including graduate students, may be admitted for one or two semesters. Such students shall continue as candidates for degrees at the University of California. Neither they nor the junior scholars of Peking University participating in this exchange shall be candidates for degrees of the host institution. The number of University of California students and Peking University scholars participating in this exchange may be modified in the future by mutual written agreement of the parties hereto.

3. Participating students of the University of California and participating scholars of Peking University shall be selected by the home university on the basis of academic excellence and seriousness of interest in study made available through the exchange programme, and they shall be qualified pursuant to the requirements and regulations of each institution. Each institution reserves the right to reject candidates whom it considers do not meet their academic requirements.

   In addition, Peking University understands that placement of visiting scholars is dependent upon the interest of a University of California academic department to receive such scholars. Placement of such scholars cannot be guaranteed through the procedures used to admit students. Peking University agrees that in general the scholars whom it proposes for the exchange will have established previous individual contacts with University of California faculty members and departments. Moreover, to improve placement chances for said Peking University scholars at the University of California, Peking University agrees to consult with the resident University of California faculty member in Beijing about the suitability of its proposed scholars for acceptance as visiting scholars at the University of California.

4. Each University of California student and Peking University scholar in the exchange programme shall pursue an academic programme which is developed in consultation with his respective institution and which is not in conflict with the regulations of the host university. Peking University agrees to provide appropriate advisory and other academic services to the University of California students enrolled at Peking University. The University of California agrees, subject to facility and procedural constraints as described herein, to provide academic advisory services and library privileges to scholars from Peking University participating under the terms of this exchange.

5. The Regents shall appoint a senior member of the faculty of the University of California to serve as the representative of the University of California in its daily contacts with Peking University. Said representative shall be the first point of contact in any emergency or any matter pertaining to student discipline or welfare, and shall co-operate as appropriate with members of the academic staff of Peking University in the academic advising of the University of California students and in the evaluation of the quality of their work. In medical emergencies and other emergencies, Peking University agrees to provide students and the resident University of California faculty member participating under the terms of this exchange access to emergency services and emergency local transportation as may be needed, including emergency transportation to Capital Hospital for Foreigners.

   Said University of California senior faculty member shall be designated as a Foreign Expert at Peking University and shall be provided housing in Apartment Sixteen (16) of the North Guest House (Beizhao). The combined monthly rental fee for said apartment and for a private office in Shao Yuan for the use of the University of California representative and students shall be no more than Seven Hundred and Fifty Dollars ($750).

6. Both the University of California and Peking University agree within the framework of this Agreement to work together towards the integration of University of California students into Chinese student life and the integration of Peking University scholars into American academic life.

7. University of California students will be housed in dormitories of Peking University, two (2) students per room, preferably with Chinese roommates. Said University of California students may choose to take their meals in the cafeteria for foreign students or in the Chinese students' cafeteria. The cost for such housing and meals shall be at a cost no greater than that charged to other students housed in the dormitory for foreign students. The cost for such housing and meals shall be paid by the students as individuals.

   Housing for scholars of Peking University will be arranged by the scholars individually, with assistance from the housing office or the Office of International Students and Scholars on the campus of the University of California on which they are located. The cost for such housing will be paid by the scholars as individuals.

8. Both the University of California and Peking University agree that student fees for each forthcoming year shall be determined through discussion prior to December of each year. However, the student fee for the first three years of this Agreement shall be no more than One Thousand Six Hundred Dollars ($1,600) per student per academic year (Eight Hundred Dollars ($800) for spring-semester-only students).

   The University of California further agrees to provide maintenance funds equal to the requirement established by each campus of the University of California for the issuance of a visa authorization (approximately Ten Thousand Dollars ($10,000) per year), for each Peking University visiting scholar participating under the terms of this Agreement.

The University of California agrees that Peking University scholars visiting the University of California under this Agreement shall be exempt from all tuition and fees. In exchange, Peking University agrees to exempt an equal number of University of California students enrolling at Peking University from all tuition and fees.

9. It is understood that this Agreement shall commence on the First Day of July, 1991, and shall continue thereafter for five (5) years, subject from time to time to revision or modification by mutual written agreement. Either party hereto, by written notice to the other party no less than five (5) months prior to the end of any such year period, may terminate this Agreement at the end of such current year period.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

The regents of the **University of California**	**The Peking University**
By ____________________	By ____________________

THIRD AGREEMENT

THIS AGREEMENT is made and entered into as of the First day of July, 1997, by and between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California corporation, hereinafter designated as the 'CALIFORNIA UNIVERSITY', and THE PEKING UNIVERSITY, hereinafter designated as 'PEKING UNIVERSITY'.

WITNESSETH:

WHEREAS, the parties hereto believe that education at their respective institutions would be enhanced and mutual understanding between their respective students would be increased by the continuation of an academic exchange programme between the University of California and Peking University,

NOW THEREFORE, the parties hereto agree as follows:

1. The Agreement entered into between the parties hereto on the fourteenth day of February, 1993, is terminated as of the effective date of this Agreement.

2. During the 1996-97 academic year, and for each year during the term of this Agreement, not more than thirty (30) students enrolled at the University of California may be enrolled for the regular academic year at Peking University through this exchange Agreement. Five (5) additional University of California students may enrol for the Spring semester at Peking University under the terms of this Agreement for a period of time limited to one semester only.

   For every ten (10) University of California students enrolled under this Agreement at Peking University for a full academic year, one scholar from Peking University may visit the University of California for one academic year as a visiting scholar through this exchange agreement.

For any fraction of ten (10) University of California students per academic year, fractional credit may be generated and carried forward from one academic year to the next until a full credit is earned. Full credits shall be used by a Peking University visiting scholar within the academic year following the year in which the full credit was finally generated.

3. Participating students from the University of California shall have completed at least two (2) years of university work prior to enrolling at Peking University. Students, including graduate students, may be admitted for one or two semesters. Such students shall continue as candidates for degrees at the University of California. Neither they nor the junior scholars of Peking University participating in this exchange shall be candidates for degrees of the host institution. The number of University of California students and Peking University scholars participating in this exchange may be modified in the future by mutual written agreement of the parties hereto.

4. Participating students of the University of California and participating scholars of Peking University shall be selected by the home university on the basis of academic excellence and seriousness of interest in study made available through the exchange programme, and they shall be qualified pursuant to the requirements and regulations of each institution. Each institution reserves the right to reject candidates whom it considers do not meet its academic requirements.

   In addition, Peking University understands that each college and each department in the various University of California campuses shall act in accordance with its own procedures and capabilities in its arrangements to accept Peking University reciprocity scholars. Placement of such scholars cannot be guaranteed through the procedures used to admit students. Peking University agrees that in general the scholars it proposes for the exchange will have established previous individual contacts with University of California faculty members and departments. Moreover, to improve placement chances for said Peking

University scholars at the University of California, Peking University agrees to consult with the University of California representative in Beijing about the suitability of its proposed scholars for acceptance as visiting scholars at the University of California. In this regard, the designated University of California representative shall exert every reasonable effort to be of assistance.

5. Each University of California student and Peking University scholar in the exchange programme shall pursue an academic programme which is developed in consultation with his/her respective institution and which is not in conflict with the regulations of the host university. Peking University agrees to provide appropriate advisory and other academic services to University of California students enrolled at Peking University. The University of California agrees, subject to facility and procedural constraints as described herein, to provide academic advisory services and library privileges to scholars from Peking University participating under the terms of this exchange.

6. The University of California shall appoint a senior member of its faculty to serve as the representative of the University of California in its daily contacts with Peking University. Said representative shall be the first point of contact in any emergency or any matter pertaining to student discipline or welfare, and shall co-operate as appropriate with members of the academic staff of Peking University in the academic advising of University of California students and in the evaluation of the quality of their work. In medical emergencies and other emergencies, Peking University agrees to provide students and the resident University of California faculty member participating under the terms of this exchange, access to emergency services and emergency local transportation as may be needed, including emergency transportation to an appropriate hospital for foreigners. It is understood that the cost for provision of said services shall be borne by the students as individuals.

Said University of California senior faculty member shall be designated as a Foreign Expert at Peking University and shall be provided housing in Apartment Sixteen (16) of the North Guest House (Beizhao). The combined monthly rental fee for said apartment and for a private office in Shaoyuan for the use of the University of California representative and students shall be no more than Seven Hundred and Fifty Dollars (US$750).

7. Both the University of California and Peking University agree within the framework of this Agreement to work together towards the integration of University of California students into Chinese student life and the integration of Peking University scholars into American academic life.

8. University of California students will be housed in dormitories of Peking University, two (2) students per room, preferably with Chinese or other non-English-speaking roommates. Said University of California students may choose to take their meals in the cafeteria for foreign students or in the Chinese students' cafeteria. The cost for such housing and meals shall be at a cost no greater than that charged to other students housed in the dormitory for foreign students. The cost for such housing and meals shall be paid by the students as individuals.

   Housing for scholars of Peking University will be arranged by the scholars individually, with assistance from the housing office or the Office of International Students and Scholars on the campus of the University of California on which they are located. The cost for such housing will be paid by the scholars as individuals.

9. For each student enrolled under the terms of this Agreement, the University of California agrees to pay to Peking University, Foreign Student Tuition less a reduction in the amount of twenty-five per cent (25 per cent), and an Admission Fee in the amount of Twenty-five

Dollars (US$25) per student. Other than minor fees for books and for special courses involving field trips, no other fees will be charged.

In recognition of said tuition discount and facilities provided by Peking University, the University of California agrees to provide maintenance funds equal to the requirement established by each campus of the University of California for the issuance of a visa authorization (in the amount of approximately Ten Thousand Dollars (US$10,000) per academic year), for each Peking University visiting scholar participating under the terms of this Agreement.

10. The parties agree to execute both a Chinese and an English-language version of this Agreement. Both versions shall have equal standing.

11. It is understood that this Agreement shall commence on the First Day of July, 1996, and shall continue thereafter for five (5) years, subject from time to time to revision or modification by mutual written agreement. Either party hereto, by written notice to the other party no less than five (5) months prior to the end of any such year period, may terminate this Agreement at the end of such current year period.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and the year first above written.

DATE: ________________	DATE: ________________
The regents of the University of California	**The Peking University**
By ______________________	By ______________________

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The book

Within the context of major social and economic reform in China, the University of Peking has been confronted, since the early 1980s, with a number of important challenges, such as financial constraints, academic programmes with too narrow a scope and lacking in quality, insufficient space to accommodate students, and the continuous brain-drain of its academic staff. One of the solutions to overcome this situation has been inter-university collaboration with other higher education institutions, both inside the country and abroad. The aim of such collaboration is to share resources, organize joint study programmes and exchange visits of students and staff.

This case study on the experience of the University of Peking in inter-university co-operation describes the process of identifying appropriate partner institutions and implementing collaborative programmes with them. Finally, it highlights a number of lessons for those managing inter-university co-operation and shows how such initiatives can be successfully implemented.

The author

Dr Min Wiefang is currently the Executive Vice-President of Peking University, as well as Director and Professor of the Institute of Higher Education. He is also Chairman of the Expert Panel for the World Bank EDPP Project in China and Consultant on a number of World Bank Education Projects. He has authored or co-authored numerous publications on higher education and won several Social Science Research awards in his country.

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